

Special Seminar on Diamond Detectors

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Diamond Detectors at GSI Darmstadt

The suitability of CVD (Chemical Vapor Deposition)-diamond detectors for heavy-ion timing applications operating in a harsh radiation environment is demonstrated. Results obtained from various ions up to the heaviest ^{208}Pb and ^{238}U are presented. An intrinsic time resolution of $\sigma_i = 29$ ps and a single-particle count-rate capability $> 3 \cdot 10^8$ ions/s are achieved. Since however the best pulse-height resolution obtained from diamond detectors made of such polycrystalline diamond material is in the order of $\Delta E/E \approx 60\%$, we have recently started the investigation of synthetic single-crystal High-Pressure High-Temperature (HPHT) diamond samples.

In addition there will be an informal report by

Vitaly LIECHTENSTEIN

Russian Research Center “Kurchatov Institute”
Institute of Nuclear Fusion, Moscow

**First Test of Natural Diamond Detectors with
Low-Energy Heavy Ion Beams at the VERA Lab Vienna**

Freitag, 26. Juli 2002, 10:00 – 12:00 Uhr

**1090 Wien, Währingerstr. 17, "Kavalierstrakt",
1. Stock, Seminarraum von VERA**